

About the Program

The Technical Certificate (T.C.) in Data Science Technician prepares students for a respected career as a data science technician. Data science extends to multiple areas, including artificial intelligence, biotechnology, computer engineering, computer science, information technology, robotics and telecommunications.

Program Requirements

This program requires a **minimum of 42 credit hours**. Total program hours may vary based on the student's individual academic plan. This program is **eligible** for financial aid.

Students in this program are not required to complete math courses unless they are listed as part of the certificate program. If you plan to pursue the degree program in this same field, please note **this certificate articulates directly into the Data Science Technology (6985) (A.S.) degree**, which includes a **Statistical Reasoning math pathway**. To learn more about the Data Science Technology (A.S.) degree, visit fscj.edu/academics/programs/as/2157.

Placement Testing

Please meet with an advisor to determine if college placement testing is required. Students who place into **developmental education courses** are required to complete designated developmental education courses with a grade of C or higher regardless of program of study and are also required to take one of two student success strategies courses. For additional information, visit catalog.fscj.edu/academics/developmental-education-programs or speak with an advisor.

Technical Certificate Graduation Requirements

- ☐ Fulfill all academic requirements for the chosen program of study as outlined in the Florida State College at Jacksonville catalog and curriculum.
- ☐ Earn minimum prescribed semester hours for the chosen program of study with a cumulative grade point average of 2.0 (C) on a 4.0 scale on all courses that apply to the chosen program of study.
- ☐ Complete a minimum of 25 percent of the total hours required for the program in residence at Florida State College at Jacksonville. Credit by examination and credit for prior learning do not count toward this residency requirement.
- ☐ Fulfill all obligations, financial or otherwise, to the College before graduating.

Catalog Year

This document is prepared for students with a **2025-26 College Catalog year** who have not tested into developmental education courses. **Students who enter under the 2025-26 catalog** will be assigned to the degree or certificate requirements in effect during the 2025-26 academic year. The student's assigned catalog year will remain in effect as long as the student maintains continuous enrollment. Changes to requirements as mandated by law or by rule of the District Board of Trustees may supersede this provision.

To maintain continuous enrollment, a student must have registration for, and successful completion of, at least one course within a three-term period. After three consecutive terms of no enrollment, the student will be discontinued from the current program of study and will need to apply to FSCJ to reenter under the same program of study. Upon readmission, the student will be assigned to the current catalog of record in the chosen program.

Curriculum

A minimum grade of C or higher is required in all professional coursework.

Sample Roadmap

This sample roadmap shows one possible pathway to program completion and may not be appropriate for all students. **Terms Offered** are subject to change. Please verify course availability at fscj.edu/schedules.

Term 1

Before enrolling in your first term classes, **please meet with an advisor** for specific guidance about your academic plan.

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| <input type="checkbox"/> General Education Mathematics: <i>recommended course</i> MGF 1130 - Mathematical Thinking , Credit Hours: 3. Note: Any General Education Mathematics State Core course may be used to satisfy this requirement. Terms Offered: Fall, Spring, Summer. | Grade Earned: _____ |
| <input type="checkbox"/> COP 1000C - Introduction to Computer Programming , Credit Hours: 3. Terms Offered: Fall, Spring, Summer. | Grade Earned: _____ |
| <input type="checkbox"/> CGS 1060C - Introduction to Information Technology , Credit Hours: 3. Terms Offered: Fall, Spring, Summer. | Grade Earned: _____ |
| <input type="checkbox"/> CGS 2512C - Spreadsheet Concepts and Practices , Credit Hours: 3. Terms Offered: Fall, Spring, Summer. | Grade Earned: _____ |
| <input type="checkbox"/> CNT 1015C - Operating Systems Foundations , Credit Hours: 3. Terms Offered: Fall, Spring, Summer. | Grade Earned: _____ |

Term 2

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| <input type="checkbox"/> COP 2800C - Java 1 , Credit Hours: 3. Terms Offered: Fall, Spring. | Grade Earned: _____ |
| <input type="checkbox"/> CTS 2437C - SQL Server I - Fundamentals , Credit Hours: 3. Terms Offered: Fall, Spring, Summer. | Grade Earned: _____ |
| <input type="checkbox"/> COP 2034C - Programming in Python , Credit Hours: 3. Terms Offered: Fall, Spring. | Grade Earned: _____ |
| <input type="checkbox"/> COP 2822C - Web Technologies , Credit Hours: 4. Terms Offered: Fall, Spring, Summer. | Grade Earned: _____ |

Term 3

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| <input type="checkbox"/> CAP 2741C - Data Visualization , Credit Hours: 2. Terms Offered: Fall 2025, Summer 2026, Spring 2027, Summer 2027. | Grade Earned: _____ |
| <input type="checkbox"/> CIS 2349C - Introduction to Big Data Applications , Credit Hours: 3. Terms Offered: Spring, Summer. | Grade Earned: _____ |
| <input type="checkbox"/> COP 2073C - Introduction to Statistical Programming with R , Credit Hours: 3. Terms Offered: Fall, Summer. | Grade Earned: _____ |
| <input type="checkbox"/> CTS 2456C - Introduction to SAS Programming , Credit Hours: 3. Terms Offered: Spring, Summer. | Grade Earned: _____ |
| <input type="checkbox"/> CAP 2787C - Data Warehousing , Credit Hours: 3. Terms Offered: Fall 2025, Spring 2026. | Grade Earned: _____ |

Course Requirements

Prerequisites, corequisites, and conditions for any course are subject to change. Students must meet the prerequisite and corequisite requirements of any course at the time the student attempts to register for that course. If you have questions about the prerequisites, corequisites, or conditions for a course, please contact any academic advisor.

General Education Mathematics Courses

Complete one of the following courses.

MGF 1130 is the recommended course.

MAC 1105 - College Algebra, Credit Hours: 3. *State Core course.*

Prerequisite(s): MAT 1033 with a grade of C or higher or a satisfactory score on the placement test. **Corequisite(s):** None. **Conditions:** This course fulfills the Gordon Rule computation requirement and must be completed with a grade of C or higher (pursuant to State Board of Education Rule 6A-10.030). Effective Spring 2014, students who entered the ninth grade in a Florida public high school in the 2003-2004 school year, or any year thereafter, and earned a standard Florida high school diploma, or students who are serving as active duty members in any branch of the United States Armed Services, will not be required to take the common placement test (P.E.R.T.) or to enroll in developmental education at any Florida College System institution, including Florida State College at Jacksonville (per Senate Bill 1720, State Board Rule 6A-10.0315). These students shall be considered exempt from common placement testing and developmental education instruction, and may accordingly enroll directly in MAT 1033 or MGF 1130 or MGF1131. For placement in any college-credit math course beyond MAT 1033 or MGF 1130 or MGF1131, exempt students will be required to take the common placement test. This course may require proctored testing at an approved location. Students may be charged testing fees at off-campus and virtual testing locations. For additional information and resources, please see the College's Online Learning website. **Terms Offered:** Fall, Spring, Summer.

MAC 1105C - College Algebra Enhanced, Credit Hours: 5. *State Core course.*

Prerequisite(s): MAT 1033 with a grade of D or higher or MAC 1105 with a grade of D or lower or a satisfactory score on the placement test. **Corequisite(s):** None. **Conditions:** This course fulfills the Gordon Rule computation requirement and must be completed with a grade of C or higher (pursuant to State Board of Education Rule 6A-10.030). Effective Spring 2014, students who entered the ninth grade in a Florida public high school in the 2003-2004 school year, or any year thereafter, and earned a standard Florida high school diploma, or students who are serving as active duty members in any branch of the United States Armed Services, will not be required to take the common placement test (P.E.R.T.) or to enroll in developmental education at any Florida College System institution, including Florida State College at Jacksonville (per Senate Bill 1720, State Board Rule 6A-10.0315). These students shall be considered exempt from common placement testing and developmental education instruction, and may accordingly enroll directly in MAT 1033 or MGF 1130 or MGF 1131. For placement in any college-credit math course beyond MAT 1033 or MGF 1130 or MGF 1131, exempt students will be required to take the common placement test. This course may require proctored testing at an approved location. Students may be charged testing fees at off-campus and virtual testing locations. For additional information and resources, please see the College's Online Learning website. **Terms Offered:** Fall, Spring, Summer.

MAC 1114 - College Trigonometry, Credit Hours: 3. **Prerequisite(s):** MAC 1105 or MAC 1105C each with a grade of C or higher. **Corequisite(s):** None. **Conditions:** A strong high-school Algebra background is recommended. This course fulfills the Gordon Rule computation requirement and must be completed with a grade of C or higher (pursuant to State Board of Education Rule 6A-10.030). **Terms Offered:** Fall, Spring, Summer.

MAC 1140 - Precalculus Algebra, Credit Hours: 4. **Prerequisite(s):** MAC 1105 or MAC 1105C each with a grade of C or higher or a satisfactory score on the placement test. **Corequisite(s):** None. **Conditions:** This course fulfills the Gordon Rule computation requirement and must be completed with a grade of C or higher (pursuant to State Board of Education Rule 6A-10.030). **Terms Offered:** Fall, Spring, Summer.

MAC 1147 - Precalculus Algebra and Trigonometry, Credit Hours: 5. **Prerequisite(s):** MAC 1105 or MAC 1105C each with a grade of B or higher or a satisfactory score on the placement test. **Corequisite(s):** None. **Conditions:** This course fulfills the Gordon Rule computation requirement and must be completed with a grade of C or higher (pursuant to State Board of Education Rule 6A-10.030). **Terms Offered:** Fall, Spring, Summer.

MAC 2233 - Calculus for Business and Social Sciences, Credit Hours: 3. **Prerequisite(s):** MAC 1105 or MAC 1105C or MAC 1140 each with a grade of C or higher or a satisfactory score on the placement test. **Corequisite(s):** None. **Conditions:** Appropriate technology is required. This course does not satisfy degree requirements for students majoring in mathematics or engineering. This course fulfills the Gordon Rule computation requirement and must be completed with a grade of C or higher (pursuant to State Board of Education Rule 6A-10.030). **Terms Offered:** Fall, Spring, Summer.

MAC 2311 - Calculus With Analytic Geometry I, Credit Hours: 4. *State Core course.* **Prerequisite(s):** MAC 1140 and MAC 1114 each with a grade of C or higher or MAC 1147 with a grade of a C or higher. **Corequisite(s):** None. **Conditions:** This course fulfills the Gordon Rule computation requirement and must be completed with a grade of C or higher (pursuant to State Board of Education Rule 6A-10.030). **Terms Offered:** Fall, Spring, Summer.

MAC 2312 - Calculus With Analytic Geometry II, Credit Hours: 4. **Prerequisite(s):** MAC 2311 with a grade of C or higher. **Corequisite(s):** None. **Conditions:** This course fulfills the Gordon Rule computation requirement and must be completed with a grade of C or higher (pursuant to State Board of Education Rule 6A-10.030). **Terms Offered:** Fall, Spring, Summer.

MAC 2313 - Calculus With Analytic Geometry III, Credit Hours: 4. **Prerequisite(s):** MAC 2312 with a grade of C or higher. **Corequisite(s):** None. **Conditions:** This course fulfills the Gordon Rule computation requirement and must be completed with a grade of C or higher (pursuant to State Board of Education Rule 6A-10.030). **Terms Offered:** Fall, Spring, Summer.

MGF 1130 - Mathematical Thinking, Credit Hours: 3. *State Core course.* **Prerequisite(s):** Satisfactory score on the placement test for non-exempt students. **Corequisite(s):** None. **Conditions:** This course fulfills the Gordon Rule of Computation requirement and must be completed with a grade of C or higher (pursuant to State Board of Education Rule 6A-10.030). Effective Spring 2014, students who entered the ninth grade in a Florida public high school in the 2003-2004 school year, or any year thereafter, and earned a standard Florida high school diploma, or students who are serving as active duty members in any branch of the United States Armed Services, will not be required to take the common placement test or to enroll in developmental education at any Florida College System institution, including Florida State College at Jacksonville (per State Board Rule 6A-10.0315). These students shall be considered exempt from common placement testing and developmental education instruction, and may accordingly enroll directly in MAT 1033 or MGF 1130 or MGF 1131, depending on their program of study requirement. For placement in any math course beyond MAT 1033 or MGF 1130 or MGF 1131, exempt students will be required to take the common placement test. **Terms Offered:** Fall, Spring, Summer.

MAP 2302 - Differential Equations, Credit Hours: 3. **Prerequisite(s):** MAC 2312 with a grade of C or higher. **Corequisite(s):** None. **Conditions:** This course fulfills the Gordon Rule computation requirement and must be completed with a grade of C or higher (pursuant to State Board of Education Rule 6A-10.030). **Terms Offered:** Fall, Spring, Summer.

STA 2023 - Elementary Statistics, Credit Hours: 3. *State Core course.*

Prerequisite(s): Satisfactory score on placement test or successful completion of MAT 1033 with a grade of C or higher. **Corequisite(s):** None. **Conditions:** This course fulfills the Gordon Rule computation requirement and must be completed with a grade of C or higher (pursuant to State Board of Education Rule 6A-10.030). **Terms Offered:** Fall, Spring, Summer.

Professional Courses

Complete all of the following courses.

CAP 2741C - Data Visualization, Credit Hours: 2. **Prerequisite(s):** COP 2822C and COP 2034C and CGS 2512C. **Corequisite(s):** None. **Conditions:** None. **Terms Offered:** **Fall 2025, Summer 2026, Spring 2027, Summer 2027.

CAP 2787C - Data Warehousing, Credit Hours: 3. **Prerequisite(s):** CTS 2437C. **Corequisite(s):** None. **Conditions:** None. **Terms Offered:** **Fall 2025, Spring 2026.

CGS 1060C - Introduction to Information Technology, Credit Hours: 3. **Prerequisite(s):** None. **Corequisite(s):** None. **Conditions:** None. **Terms Offered:** Fall, Spring, Summer.

CGS 2512C - Spreadsheet Concepts and Practices, Credit Hours: 3. **Prerequisite(s):** None. **Corequisite(s):** None. **Conditions:** None. **Terms Offered:** Fall, Spring, Summer.

CIS 2349C - Introduction to Big Data Applications, Credit Hours: 3. **Prerequisite(s):** COP 2034C, COP 2800C, CTS 2437C and CNT 1015C with a grade of C or higher. **Corequisite(s):** None. **Conditions:** None. **Terms Offered:** Spring, Summer.

CNT 1015C - Operating Systems Foundations, Credit Hours: 3. **Prerequisite(s):** None. **Corequisite(s):** None. **Conditions:** None. **Terms Offered:** Fall, Spring, Summer.

COP 1000C - Introduction to Computer Programming, Credit Hours: 3. **Prerequisite(s):** None. **Corequisite(s):** None. **Conditions:** Suggested Course: MAT 1033 with a grade of C or higher or satisfactory score on mathematics placement test. **Terms Offered:** Fall, Spring, Summer.

COP 2034C - Programming in Python, Credit Hours: 3. **Prerequisite(s):** COP 1000C. **Corequisite(s):** None. **Conditions:** None. **Terms Offered:** Fall, Spring.

COP 2073C - Introduction to Statistical Programming with R, Credit Hours: 3. **Prerequisite(s):** COP 1000C. **Corequisite(s):** None. **Conditions:** Students are strongly recommended to take STA 2023 prior to enrollment in this course. **Terms Offered:** Fall, Summer.

COP 2800C - Java 1, Credit Hours: 3. **Prerequisite(s):** COP 1000C with a grade of C or higher. **Corequisite(s):** None. **Conditions:** None. **Terms Offered:** Fall, Spring.

COP 2822C - Web Technologies, Credit Hours: 4. **Prerequisite(s):** COP 1000C. **Corequisite(s):** None. **Conditions:** None. **Terms Offered:** Fall, Spring, Summer.

CTS 2437C - SQL Server I - Fundamentals, Credit Hours: 3. **Prerequisite(s):** COP 1000C. **Corequisite(s):** None. **Conditions:** None. **Terms Offered:** Fall, Spring, Summer.

CTS 2456C - Introduction to SAS Programming, Credit Hours: 3. **Prerequisite(s):** COP 1000C. **Corequisite(s):** None. **Conditions:** None. **Terms Offered:** Spring, Summer.